



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

11-D

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,280	01/21/2004	Akihiro Kimura	03500.017840.	9839

5514 7590 06/05/2007
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

RAABE, CHRISTOPHER M

ART UNIT	PAPER NUMBER
----------	--------------

2879

MAIL DATE	DELIVERY MODE
-----------	---------------

06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/760,280

Applicant(s)

KIMURA ET AL.

Examiner

Christopher M. Raabe

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's submission, filed March 13, 2007 has been entered and acknowledged by the examiner.
2. Applicant's arguments filed November 22, 2006 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1,3,5-7 are rejected under 35 U.S.C. 103(a) as being obvious over Sato (USPN 2001/0039161), in view of Suzuki (USPN 6638128).

With regard to claim 1,

Sato discloses in at least figures one and three, an energization processing apparatus for performing, in a reduced-pressure atmosphere, an energization process on electric conductors (not labeled) which are placed on a substrate (101), comprising: a vessel (102) which has an exhaust hole (not labeled, junction between vessel 102 and evacuation system 106) and which covers the electric conductors (not labeled) and one region (not labeled, that covered by vessel 102) on a surface of the substrate (101) where the electric conductors (not labeled) are placed, to create an airtight atmosphere (via 103) between the substrate (101) and the vessel (102), wherein a further region (that not covered by the vessel 102) on the surface of the substrate (101) is located outside of the vessel (102), and wherein the one region (not labeled) is under reduced pressure atmosphere, and the further region is under atmospheric air (this is capable of being performed by evacuation system 106, via the vessel 102, substrate 101, and sealing member 103); a first temperature adjusting mechanism (center 311,312) for generating a heat quantity per unit area to adjust a temperature of the one region (not labeled); and a second temperature adjusting mechanism (outer 311,312) for generating a heat per unit area quantity to adjust a temperature of another region (not labeled)). The phrase "which is different from the heat quantity per unit area generated by the second temperature adjusting mechanism" does not structurally distinguish the claimed invention from the prior art, as is required of apparatus claims (MPEP 2114)

Sato does not disclose the second temperature adjusting mechanism for adjusting the temperature of the further region.

Suzuki does disclose in column 25, line 50 through column 26, line 10 a second temperature adjusting mechanism for adjusting a temperature of a further region of a substrate where there is a first temperature adjusting mechanism for adjusting a temperature of a first region of the substrate, providing an even temperature distribution across the substrate.

Art Unit: 2879

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the configuration of Suzuki into the apparatus of Sato in order to provide an even temperature distribution across the substrate.

With regard to claim 3,

Sato discloses an energization processing method in at least figures 1 and 3 for performing, in a reduced-pressure atmosphere, an energization process on electric conductors (not labeled) which are placed on a substrate (101), comprising the steps of: covering the electric conductors (not labeled) and one region (not labeled, that covered by vessel 102) on a surface of the substrate (101) where the electric conductors (not labeled) are placed with a vessel (102) which has an exhaust hole (not labeled, junction between evacuation system 106, and vessel 102) to create an airtight atmosphere (via 103) between the substrate (101) and the vessel (102), wherein a further region (not labeled, that not covered by vessel 102) on the surface of the substrate (101) is located outside the vessel; reducing a pressure of the airtight atmosphere, wherein the one region (not labeled) is under reduced pressure atmosphere, and the further region (not labeled) is under atmospheric air (paragraphs 64,65).

Sato does not disclose heating the one region with a smaller heat quantity while heating the further region with a larger heat quantity.

Suzuki does disclose (implicitly) heating another region on the surface of a substrate not covered with a vessel with a heat quantity larger than a heat quantity for heating one region on the surface of the substrate covered with the vessel (column 25, line 50 – column 26, line 10: note in particular lines 58-67 of column 25), providing an even temperature distribution across the substrate, thus suppressing a temperature difference between the one region and the further region.

Art Unit: 2879

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the configuration of Suzuki into the apparatus of Sato in order to provide an even temperature distribution across the substrate.

With regard to claim 5,

Sato discloses the energization processing apparatus according to claim 1.

Sato does not disclose the first temperature adjusting mechanism having a first thermal conducting member touching a surface of the substrate just opposite the one region, while the second temperature adjusting mechanism has a second thermal conducting member touching a surface of the substrate just opposite the further region.

Suzuki does disclose in column 25, line 50 through column 26, line 10 and in at least figure 28, the first temperature adjusting mechanism having a first thermal conducting member (103,Z201-2,Z202-2) touching a surface (not labeled) of the substrate (102) just opposite the one region (102A), while the second temperature adjusting mechanism having a second thermal conducting member (103,Z201-1,Z202-1) touching a surface (not labeled) of the substrate (102) just opposite the further region (not labeled), providing an even temperature distribution across the substrate.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the configuration of Suzuki into the apparatus of Sato in order to provide an even temperature distribution across the substrate.

With regard to claim 6,

Sato discloses the energization processing apparatus according to claim 1.

Sato does not disclose the second temperature adjusting mechanism to be capable of thermal generation larger than that of the first temperature adjusting mechanism, to suppress a temperature difference between the one region and the further region.

Suzuki does disclose in column 25, line 50 through column 26, line 10 (note in particular lines 58-67 of column 25) the second temperature adjusting mechanism to be capable of thermal generation larger than that of the first temperature adjusting mechanism, to suppress a temperature difference between the one region and the further region, providing an even temperature distribution across the substrate.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the configuration of Suzuki into the apparatus of Sato in order to provide an even temperature distribution across the substrate.

With regard to claim 7,

Sato discloses the energization processing apparatus according to claim 1.

Sato does not disclose a heat insulating member located at a side opposing the further region on the surface of the substrate.

Suzuki does disclose in at least figure 28 a heat insulating member (103,Z201-1,Z202-1) located at a side opposing the further region (not labeled) on the surface of the substrate (102).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the configuration of Suzuki into the apparatus of Sato in order to provide an even temperature distribution across the substrate.

Response to Arguments

Art Unit: 2879

5. While the applicant argues that nothing in Sato or Suzuki would disclose or suggest a temperature adjusting mechanism for generating different heat quantity per unit area for the one region covered with the vessel and for the further region outside the vessel, or would disclose or suggest heating the one region covered with the vessel with a smaller heat quantity per unit area while heating the further region outside of the vessel with a larger heat quantity, the examiner asserts that these features and steps are suggested by the combination of the Sato reference in figure 1 and Suzuki reference in columns 25 and 26. In column 25 of Suzuki, it is suggested to eliminate the temperature distribution of the substrate, particularly referencing the temperature difference between the device region of the substrate (the one region covered by the vessel 102 of Sato) and the peripheral region of the substrate (the further region not covered by the vessel 102 of Sato). Therefore the rejections are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2879

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Raabe whose telephone number is 571-272-8434. The examiner can normally be reached on m-f 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CR



KARABI GUHARAY
PRIMARY EXAMINER